Lesson 3 Reteach

The Percent Proportion

A **percent proportion** compares part of a quantity to a whole quantity for one ratio and lists the percent as a number over 100 for the other ratio.

$$\left. \begin{array}{l} \text{part} \to \\ \text{whole} \to \end{array} \frac{p}{w} = \frac{n}{100} \right\} \text{percent}$$

Example 1

What percent of 24 is 18?

$\dfrac{p}{w} = \dfrac{n}{100}$ Percent proportion

Let $n\%$ represent the percent.

$\dfrac{18}{24} = \dfrac{n}{100}$ Write the proportion.

$18 \times 100 = 24 \times n$ Find the cross products.

$1{,}800 = 24n$ Simplify.

$\dfrac{1{,}800}{24} = \dfrac{24n}{24}$ Divide each side by 24.

$75 = n$

So, 18 is 75% of 24.

Example 2

What number is 60% of 150?

$\dfrac{p}{w} = \dfrac{n}{100}$ Percent proportion

Let $n\%$ represent the percent.

$\dfrac{n}{150} = \dfrac{60}{100}$ Write the proportion.

$n \times 100 = 150 \times 60$ Find the cross products.

$100n = 9{,}000$ Simplify.

$\dfrac{100n}{100} = \dfrac{9{,}000}{100}$ Divide each side by 100.

$n = 90$

So, 90 is 60% of 150.

Exercises

Find each number. Round to the nearest tenth if necessary.

1. What number is 25% of 20?

2. What percent of 50 is 30?

3. 30 is 75% of what number?

4. 40% of what number is 36?

5. What number is 20% of 625?

6. 12 is what percent of 30?